

## **REMARKS**

**[0006]** Applicant respectfully requests reconsideration and allowance of all of the claims of the application. The status of the claims is as follows:

- Claims 1-3, 6-11, 13-14, and 44 are currently pending
- Claim 12 is canceled herein
- No claims are amended herein
- New claim 45 is added herein

**[0007]** Furthermore, new claim 45 is fully supported by the Application, and therefore does not constitute new matter. Support for this new claim is found in the specification at least at page 5 line 5, page 9 line 13, and claims 1, 2, 3, 6 and 7. New claim 45 allowable over the cited documents of record at least because claims 1, 2, 3, 6 and 7 are allowable.

### **Cited Documents**

**[0008]** The following documents have been applied to reject one or more claims of the Application:

- **Abu El Ata:** Abu El Ata, U.S. Patent No. 6,311,144
- **Graupner:** Graupner, U.S. Patent No. 7,035,930

### **Claims 1-14 and 44 Are Non-Obvious Over Graupner in view of Abu El Ata.**

**[0009]** Claims 1-14 and 44 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Graupner in view of Abu El Ata. Applicant respectfully traverses the rejection, and points out that claims 4 and 5, while included by the Office in this Office

Action heading, were canceled in a prior Office Action response and therefore are no longer pending.

### *Independent Claim 1*

[0010] Applicant submits that the Office has not made a *prima facie* showing that independent claim 1 is obvious in view of the combination of Graupner and Abu El Ata. Applicant submits that the combination of Graupner and Abu El Ata does not teach or suggest the following features of this claim (with emphasis added):

- **receiving**, by a system validation computing device configured to facilitate validation of a system being designed prior to attempting to deploy the system, **a description of the system being designed to be used in an environment of a data center** but not yet deployed to the data center;
- **receiving**, by the system validation computing device, **a description of an environment that simulates a target-deployment environment**, wherein the target-deployment environment is the data center in which the system is to be deployed; and
- **using**, by the system validation computing device, **both of the received descriptions to validate the system against the environment while the system is being designed** and prior to attempting to deploy the system to the data center.

[0011] Claim 1 recites in part, “receiving, by a system validation computing device configured to facilitate validation of a system being designed prior to attempting to deploy the system, a description of the system being designed to be used in an environment of a data center but not yet deployed to the data center.” The Office states that, “Graupner teaches a method comprising: receiving, by a system validation

computing device, a description of a system being deployed (Col. 2, line 65 – Col. 3, line 1).” (Office Action, page 2). However, the claim recites, “configured to facilitate validation of a system being designed prior to attempting to deploy the system.” Claim 1 also recites “designed to be used in an environment of a data center but not yet deployed to the data center.” Graupner describes, “service domain 102 refers to the model layers that describe the services provided by the software application and the software components that provide the services.” (Graupner Col. 2, line 65 – Col. 3, line 1). However, Graupner makes no mention of “a system validation” or “a system being designed prior to attempting to deploy the system,” as claim 1 recites.

**[0012]** Graupner “provides a computer-based method and framework for identifying optimal allocations of computing resources in a complex, distributed data processing environment.” (Graupner, Col. 2 lines 7-10 “Summary of the Invention”). “Identifying optimal allocations,” as Graupner teaches, is not the same as “a system validation” as recited in claim 1.

**[0013]** The Office goes on to state that, “Graupner does not explicitly indicate that the system is still being designed, and has yet to be deployed in any environment.” (Office Action, page 3). Applicant appreciates the Office’s distinction of “in any environment” as opposed to the claim language reciting, “an environment of a data center.” However, the Office states further that, “Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45), and the modeled and deployed system includes among other embodiments, database centers (Col. 6, lines 24-27; Col. 19, lines 13-42).” (Office Action, page 3).

**[0014]** Abu El Ata teaches that it is “for designing an information system for a use in an organization. The system receives descriptive input about a prospective information system to be designed, validates this information, then transforms the descriptive input into quantitative input, which is used to construct one or more models of an information system.” (Abu El Ata, Col 3, lines 39-45). The Office seems to be equating the “descriptive input” of Abu El Ata with “a description of the system being designed to be used in an environment of a data center,” and “a description of an environment that simulates a target-deployment environment,” as claim 1 recites. However, these are not the same.

**[0015]** Abu El Ata teaches: “The system includes an input module for receiving descriptive input about a proposed information system, a construction module for constructing an initial model and additional models of the information system...” (Abu El Ata Col. 2, lines 18-22). “The input module derives validated input from the descriptive input, and the construction module derives quantitative input from the validated input.” (Abu El Ata Col. 2, lines 25-28). “Once data (descriptive input col 4 line 1) has been validated, then the input module sends the validated data to the construction module.” (Abu El Ata Col. 6 lines 42-44). Furthermore, “the system includes a library including models of hardware and software components, and the construction module uses the hardware and software component models selected from the library when constructing the information system models.” (Abu El Ata, Col. 2 lines 32-36). In summary, Abu’s descriptive input is validated, then sent to the construction module where the hardware and software components are selected. This is not the same as claim 1 which recites, “receiving, by a system validation computing device configured to facilitate validation of

a system being designed...a description of the system being designed" and "receiving, by the system validation computing device, a description of an environment that simulates a target-deployment environment" and "using, by the system validation computing device, both of the received descriptions to validate the system against the environment."

**[0016]** Consequently, the combination of Graupner and Abu El Ata does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

### Dependent Claims 2-3

**[0017]** Claims 2-3 ultimately depend from independent claim 1. As discussed above, claim 1 is allowable over the cited documents. Therefore, claims 2-3 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

### Independent Claim 6

**[0018]** Applicant submits that the Office has not made a *prima facie* showing that independent claim 6 is obvious in view of the combination of Graupner and Abu El Ata. Applicant submits that the combination of Graupner and Abu El Ata does not teach or suggest the following features of this claim (with emphasis added):

- **accessing an application description** that describes an application in the process of being designed to be used in an environment of a data center, by a program running on the one or more processors; and

- **validating the application, using the application description,** against a simulated environment, the environment comprising a description of the data center and prior to deployment to the data center.

**[0019]** Claim 6 recites in part, “validating the application, using the application description, against a simulated environment, the environment comprising a description of the data center and prior to deployment to the data center.” The Office cites Graupner (Col 10, line 60 – Col. 11, line 1), as teaching this element. (Office Action, pages 3). Graupner describes “the optimization process follows the following iterative pattern: 1. generate a possible solution; 2. evaluate the solution according to constraints and an optimization goal or policy; 3. If the evaluated solution is better than prior solutions, replace the worst solution in the solution pool with the generated solution; and 4. repeat until some termination criteria applies.” (Graupner, col 10 line 57 – col 11 line 1).

**[0020]** It appears the Office is equating the optimization process of Graupner with “validating the application” as recited in claim 6. However, the “optimization” of Graupner is not the same as the “validating” of claim 6. Graupner describes, “method and framework of generating an optimized deployment of software applications in a distributed computing environment...” (Graupner, title). Claim 6 recites, “validating the application using the application description, against a simulated environment,” which, as a person who is skilled in the art would recognize, is not the same as “generating an optimized deployment of software applications,” as taught by Graupner.

**[0021]** Furthermore, Graupner suggests generating, evaluating, replacing, and repeating until terminating, as Graupner is optimizing by “following an iterative pattern.”

(see Graupner as referred to above in [0021]). Claim 6 simply recites “accessing an application description” and “validating the application, using the application description.”

**[0022]** The Office goes on to state that, “Graupner does not explicitly indicate that the system is still being designed, and has yet to be deployed in any environment. Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45) and the modeled and deployed system includes other embodiments, database centers (Col. 6, lines 24-27; Col 19, lines 13-42).” (Office Action, pages 3-4).

**[0023]** Abu El Ata teaches that it is “for designing an information system for a use in an organization. The system receives descriptive input about a prospective information system to be designed, validates this information, then transforms the descriptive input into quantitative input, which is used to construct one or more models of an information system.” (Abu El Ata, Col 3, lines 39-45). Abu El Ata goes on to suggest, “Software components can include models of software programs, software applications, and software database management systems.” (Abu El Ata Col. 6, lines 24-26). And “In addition, the input **12** should include the distribution of applications or application subcomponents on computer servers (in a network of clients computers and server computers), data distribution on servers, network topology and protocols and network traffic (size and frequency of messages). The input should also include the description and measurements of relations between business transactions and functions, business functions and application subcomponents, and application subcomponents and system

transactions. For the network of the real system, the input should identify the parameters of the network components, such as the capacities of the network interface boards (kbps), the capacities of leased lines (kbps), and the characteristics of the routers (such as number of packets per second priorities, and compression). For the hardware configuration of the real system, the input should describe the computer servers, including server types, links between them, and partition mechanisms. The input should include data on the disk subsystems, such as channels, controllers, strings, devices, types, and physical characteristics. The input should also describe characteristics of the computer memory, such as hierarchy, service discipline, and other characteristics. The input should also describe the relationship between application subcomponents and job names or process names in order to create application groups. For relational databases, the input should provide the same types of information as described for designing a new information system in connection with FIG. 7.” (Abu El Ata, Col. 19, lines 13-42).

**[0024]** In the paragraph prior to Abu El Ata’s Col. 19, line 13, Abu El Ata teaches, “The descriptive input **12** required for the diagnostic or re-engineering process shown in FIG. 9 is similar to the descriptive input 12 required for the design of a new information system, as described in connection with FIG. 7.” (Abu El Ata, Col. 19, lines 9-12).

**[0025]** Consequently, the combination of Graupner and Abu El Ata does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

### Dependent Claims 7-10

**[0026]** Claims 7-10 ultimately depend from independent claim 6. As discussed above, claim 6 is allowable over the cited documents. Therefore, claims 7-10 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

### Independent Claim 11

**[0027]** Applicant submits that the Office has not made a *prima facie* showing that independent claim 11 is obvious in view of the combination of Graupner and Abu El Ata. Applicant submits that the combination of Graupner and Abu El Ata does not teach or suggest the following features of this claim (with emphasis added):

- **a simulator configured to simulate an environment of a data center**, the environment comprising a description of the data center, and validate the software application against the environment prior to deployment to the data center, and return a result of the validation;

**[0028]** Claim 11 recites in part, “a simulator configured to simulate an environment of a data center.” The Office cites Graupner, (Col. 4, lines 39-50) as teaching this element. (Office Action, pages 4.) Graupner describes, “the processing in a node is simulated with a time delay that simulates the processing performed by the node and expires when the node generates traffic.” (Graupner, Col 4, lines 39-41).

**[0029]** Applicant fails to recognize how “a simulator configured to simulate an environment of a data center”, as recited in claim 11, is the same as Graupner’s simulating a node. And even if the Applicant, for the sake of argument, assumes that

“an environment of a data center” of claim 11 is the same as “a node”, the purpose of Graupner’s simulation is not “to simulate the environment of a data center”, as claim 11 recites, but to “simulate with a time delay that simulates the processing performed by the node.” “Simulating the processing performed” of Graupner is not the same as “a simulator configured to simulate an environment of a data center,” as recited by claim 11, wherein, “the environment comprises(ing) a description of the data center.”

**[0030]** Consequently, the cited art does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

**[0031]** Furthermore, the Office addresses “The apparatus being separate from the data center and the apparatus being comprised, at least in part, of a computer hardware component,” (Office Action, page 4) which is a portion of Claim 11 that was removed in the prior claim amendment (in a response dated June 19, 2009).

### Dependent Claims 12-14

**[0032]** Claims 12-14 ultimately depend from independent claim 11. As discussed above, claim 11 is allowable over the cited documents. Therefore, claims 12-14 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Independent Claim 44

**[0033]** Applicant submits that the Office has not made a *prima facie* showing that independent claim 44 is obvious in view of the combination of Graupner and Abu El Ata. Applicant submits that the combination of Graupner and Abu El Ata does not teach or suggest the following features of this claim (with emphasis added):

- a simulator configured to simulate an environment of a data center, the environment comprising a description of the data center, to validate the software application against the environment prior to deployment to the data center, and to return a result of the validation;

**[0034]** Claim 44 recites in part, “a simulator configured to simulate an environment of a data center, the environment comprising a description of the data center.” The Office cites Graupner, (Col. 4, lines 39-50) as teaching this element. (Office Action, pages 6.) Graupner describes, “the processing in a node is simulated with a time delay that simulates the processing performed by the node and expires when the node generates traffic.” (Graupner, Col 4, lines 39-41).

**[0035]** Applicant fails to recognize how “a simulator configured to simulate an environment of a data center”, as recited in claim 44, is the same as Graupner’s simulating a node. And even if the Applicant, for the sake of argument, assumes that “an environment of a data center” of claim 44 is the same as “a node”, the purpose of Graupner’s simulation is not “to simulate the environment of a data center”, as claim 44 recites, but to “simulate with a time delay that simulates the processing performed by the node.” “Simulating the processing performed” of Graupner is not the same as “a simulator configured to simulate an environment of a data center,” as recited by claim 44, wherein, “the environment comprises(ing) a description of the data center.”

**[0036]** Consequently, the combination of Graupner and Abu El Ata does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

**[0037]** Furthermore, the Office addresses “the software application being designed when the one or more documents are loaded,” (Office Action, page 7) which is a portion of Claim 44 that was removed in the prior claim amendment (in a response dated June 19, 2009).

### **Expectation that the Next Action will not be Final**

**[0038]** Applicant submits that all pending claims are in condition for allowance. If the Office feels otherwise and believes that another action on the merits is necessary, then Applicant expects such an action would be Non-Final.

**[0039]** According to 37 CFR § 1.113 and MPEP 706.07, the “examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal.” “The invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied.”

**[0040]** In accordance with 37 CFR § 1.113 and MPEP 706.07(a), Applicant respectfully submits that finality would be premature for the next action for the following reasons:

- This Office Action failed to address specific claimed aspects that the Applicant has previously indicated as differing from the cited art.

## **No Action Necessitating New Grounds for Rejection or New Search**

**[0041]** Herein, Applicant does not and has not amended independent claims 1, 6, 11 and 44. Consequently, one or more claims presented herein have already been examined in the Office Action. Furthermore, Applicant explains herein why these already-examined claims differ from the cited art of record. Therefore, in accordance with 37 CFR § 1.113 and MPEP 706.07(a), finality for the next action would be premature.

## **Failure to Address Aspects of Claims Previously Identified as Distinguishing**

**[0042]** Applicant submits that the Office has not yet addressed specific claim language that the Applicant submits distinguishes the claims from the cited references. It is not that the Office disagreed about whether specific claim language distinguishes the claims from the cited references. Rather, it appears that the Office has not addressed whether specific claim language distinguishes the claims from the cited references.

**[0043]** Examples of such specific claim language referenced by the Applicant, but never addressed by the Office, may be found at the following locations in Applicant's prior response that is dated June 19, 2009:

- p. 2, claim 1: "configured to facilitate validation of system being designed prior to attempting to deploy the system," "designed to be used in an environment of a data center but not yet deployed to the data center," "wherein the target deployment environment is the data center," and "to the data center."

- p. 3, claim 6: “to be used in an environment of a data center,” and “environment, the environment comprising a description of the data center
- p. 5 claim 11: “apparatus for facilitating validation of a software application being designed to be used in an environment of a data center and prior to attempting to deploy the software application to one area of the data center,” “the environment comprising a description of the data center”
- p. 19 claim 44: “to be used in an environment of a data center,” and “the environment comprising a description of the data center”

**[0044]** This list is not intended to be exhaustive. Rather, it is intended to illustrate examples of distinguishing claim language discussed in the Applicant’s prior response, but not addressed by the Office in this Action and in its prior Action.

**[0045]** According to the reasons and facts given above and to 37 CFR § 1.113 and MPEP 706.07, Applicant respectfully submits that no clear issues have been developed between the Applicant and the Office for each pending claim so that such issues would be ready for appeal if the next action is made final. Accordingly, Applicant respectfully requests that the next action—if not a Notice of Allowance—be Non-Final.

## **Conclusion**

**[0046]** Applicant submits that all pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the Examiner is urged to contact the undersigned representative for the Applicant before issuing a subsequent Action.

Respectfully Submitted,

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